

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1 1. (Currently amended) A spread spectrum radio frequency communication system
2 comprising:
3 an exciter to provide a plurality of carrier signals grouped into a plurality of subbands;
4 a Forward Error Correction (FEC) encoder to encode digital data to provide a plurality of
5 symbol blocks, each one of the plurality of symbol blocks having a plurality of symbols;
6 an interleaver to map each symbol of one of the plurality of symbol blocks into a
7 different one of the plurality of [coherent] subbands [wherein each symbol block is segmented
8 into a plurality of symbols with each one of the plurality of symbols grouped into sets of
9 symbols, and each set of symbols is mapped to one of the plurality of coherent subbands]; and
10 a Walsh subband encoder to encode each symbol within each one of the plurality of
11 [coherent] subbands.

1 2. (Previously Presented) The communication system as recited in Claim 1 wherein the FEC
2 encoder uses a Reed Solomon FEC code.

1 3. (Previously Presented) The communication system as recited in Claim 1 wherein the
2 FEC encoder uses a Turbo Code FEC code.

1 4. (Previously Presented) The communication system as recited in Claim 1 wherein the
2 FEC encoder uses a convolution FEC code.

1 5. (Previously Presented) The communication system as recited in Claim 1 comprising a
2 transmission security device to encrypt each one of the Walsh encoded symbol sets.

1 6. (Original) The communication system as recited in Claim 5 comprising an Inverse
2 Fast Fourier Transform (IFFT) coupled to the transmission security device.

7. (Canceled)

8. (Canceled)

9. (Canceled)

1 10. (Currently amended) A method of providing a spread spectrum radio frequency
2 communication signal comprising the steps of:
3 forming a stream of data into a plurality of data packets;
4 embedding each data packet into a physical layer packet comprising the steps of adding a
5 packet header, performing a cyclic redundancy check and encoding the data;
6 the encoding the data step comprising the steps of:
7 encoding baseband data with a Reed Solomon forward error correction algorithm
8 to provide symbol blocks, each symbol block having a plurality of symbols; and
9 interleaving each symbol of one of the symbol blocks across a plurality of
10 coherent subbands wherein each symbol [block is segmented into a plurality of symbols
11 with each one of the plurality of symbols grouped into sets of symbols, and each set of
12 symbols] is mapped to one of the plurality of coherent subbands; and
13 subband-encoding each coherent subband with a low rate Walsh code.

11. (Canceled)

1 12. (Previously Presented) The system as recited in claim 13 further comprising:
2 a transmission security device to encrypt each one of the Walsh encoded symbol groups;
3 and
4 an Inverse Fast Fourier Transform (IFFT) coupled to the transmission security device.

1 13. (Currently amended) A spread spectrum radio frequency communication system
2 comprising:
3 a Forward Error Correction (FEC) encoder to encode digital data to provide a plurality of
4 symbol groups, each one of the plurality of symbol groups have a plurality of symbols, the FEC
5 encoder using a Reed Solomon FEC code;
6 an interleaver to map each one of the plurality of [symbol groups] symbols into a
7 corresponding one of a plurality of coherent subbands;
8 a Walsh subband-encoder to encode each one of the plurality of frequency subbands; and

9 a subband filter to excise a frequency subband to prevent co-site interference with
10 another radio system.

1 14. (Original) The system as recited in claim 13 further comprising a corresponding
2 receiver having a subband filter to excise the corresponding frequency subband as in the
3 transmitter.

1 15. (Original) The system as recited in claim 14 wherein both the transmitter and
2 receiver perform different subband mapping that avoids mapping symbols into excised subbands.